

Report and Recommendation of the President to the Board of Directors

Project Number: 44240-014 September 2016

Proposed Grant Kingdom of Bhutan: Thimphu Road Improvement Project

Distribution of this document is restricted until it has been approved by the Board of Directors. Following such approval, ADB will disclose the document to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 6 September 2016)

Currency unit	_	ngultrum (Nu)
Nu1.00	=	\$0.01504
\$1.00	=	Nu66.47030

ABBREVIATIONS

ADB	_	Asian Development Bank
km	_	kilometer
LAP	_	local area plan
MOWHS	_	Ministry of Works and Human Settlement
O&M	_	operation and maintenance
PAM	-	project administration manual

NOTES

- The fiscal year (FY) of the Government of Bhutan and its agencies ends on 30 June. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2016 ends on 30 June 2016.
- (ii) In this report, "\$" refers to US dollars.

Vice-President Director General Director	W. Zhang, Operations 1 H. Kim, South Asia Department (SARD) S. Bonu, Urban Development and Water Division, SARD
Team leader Team members	 K. Tamaki, Senior Urban Development Specialist, SARD J. Georget, Transport Specialist, SARD S. Mehta, Urban Development Specialist, Sustainable Development and Climate Change Department M. Montemayor, Operations Assistant, SARD J. Nam, Urban Development Specialist, SARD T. Norbu, Senior Country Coordination Officer, Bhutan Resident Mission, SARD N. Pajarillaga, Environment Specialist, SARD
Peer reviewer	C. Png, Principal Counsel, Office of the General Counsel I. Setyawati, Safeguards Specialist, SARD J. Sluijter, Transport Economist, East Asia Department

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

		Page		
PRO	JECT AT A GLANCE			
١.	THE PROPOSAL	1		
II.	THE PROJECT	1		
	 A. Rationale B. Impact and Outcome C. Outputs D. Investment and Financing Plans E. Implementation Arrangements 	1 3 3 3 4		
III.	DUE DILIGENCE	6		
	 A. Technical B. Economic and Financial C. Governance D. Poverty and Social E. Safeguards F. Risks and Mitigating Measures 	6 6 7 7 7 8		
IV.	ASSURANCES	9		
V.	RECOMMENDATION	9		
APP	ENDIXES			
1.	Design and Monitoring Framework	10		
2.	List of Linked Documents			

PROJECT AT A GLANCE

1.	Basic Data				Project Nun	nber: 44240-014
	Project Name	Thimphu Road Improvement Projec	t	Department /Division	SARD/SAUW	
	Country	Bhutan		Executing Agency	Department o	f Enaineerina
	Borrower	Kingdom of Bhutan			Services (DE	
2.	Sector	Subsector(s)			ADB Financi	ng (\$ million)
1	Transport	Urban roads and traffic managemer	nt			4.26
				Total		4.26
3.	Strategic Agenda	Subcomponents		Climate Change Info	rmation	
	Inclusive economic growth (IEG) Environmentally sustainable growth (ESG)	Pillar 1: Economic opportunities, includi jobs, created and expanded Global and regional transboundary environmental concerns Urban environmental improvement	ng	Adaptation (\$ million) Climate Change impa Project	ct on the	0.33 Medium
4.	Drivers of Change	Components		Gender Equity and M	lainstreaming	
		Institutional systems and political econor	my	Some gender element		1
5.	Poverty Targeting			Location Impact		
	Project directly targets poverty	No		Urban		High
6.	Risk Categorization:	Low				
7.	Safeguard Categorization	n Environment: B Involuntary	/ Reset	tlement: C Indigenou	I s Peoples: C	
8.	Financing					
	Modality and Sources		4	Amount (\$ million)		
	ADB				4.26	
		nt: Asian Development Fund		4.26		
	Cofinancing			0.00		
	None				0.00	
	Counterpart				0.85	
	Government				0.85	
	Total				5.11	
	L				-	
9.	Effective Development C					
	Use of country procurement					
	Use of country public finan	cial management systems Yes				

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed grant to the Kingdom of Bhutan for the Thimphu Road Improvement Project.¹

2. The proposed project² will complement the previous and ongoing urban development projects of the Asian Development Bank (ADB) to develop Thimphu, Bhutan's capital.³ The project will support the repair, resurfacing, and improvement of roads in Thimphu Thromde (municipality),⁴ and support municipal government staff's capacity building for operation and maintenance (O&M) and asset management.

II. THE PROJECT

A. Rationale

3. After experiencing strong growth during 2001–2011 with an average annual growth rate of 8.4%, Bhutan's economy slowed in 2012–2013 due to credit and import restrictions, which were imposed to alleviate a balance of payment deficit. In 2015, Bhutan's economic growth rate again increased to an estimated 5.9%, supported by the easing of credit restrictions and continued hydropower construction. Bhutan's economic growth, which is likely to accelerate further, ⁵ has been fueling rapid urbanization. Once a small percentage of the country's population, Bhutan's urban population is estimated to have grown by about 4.7% each year since 2000 when it was only 25.4%, and now forms a third of the total population; this proportion is expected to reach 50% by 2020. This unprecedented urban growth is placing severe pressure on Bhutan's cities, and has created a shortfall of basic urban infrastructure and services for residents. Meeting the challenges of urban infrastructure development, urban management, and municipal finance has become a key objective of the developmental agenda of the Government of Bhutan and its development partners.⁶

4. Established in 1995, Thimphu is the largest and fastest-growing city in Bhutan. The city's population was estimated to be 116,000⁷ in 2015 (15.3% of the national population), and it is the most densely populated place in Bhutan, with 3,046 persons per square kilometer.⁸ The city has been struggling to manage urban expansion to the north and south of the city center, and to provide sufficient basic urban infrastructure. As a part of the government's Thimphu Structure Plan,⁹ the government adopted an area-wide planned development strategy involving a land-pooling scheme, whereby each landowner contributes approximately 25% of his or her land in

¹ The design and monitoring framework is in Appendix 1.

² The project is included in ADB. 2015. *Country Operations Business Plan: Bhutan, 2016–2018*. Manila. The project was formerly known as the Urban Infrastructure Project (additional financing, Loan 2816-BHU).

³ ADB. 1998. Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Bhutan for Urban Infrastructure Improvement Project. Manila (Loan 1625-BHU); ADB. 2006. Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Kingdom of Bhutan for Urban Infrastructure Development Project. Manila (Loan 2258-BHU); ADB. 2011. Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Bhutan for Urban Infrastructure Development Project. Manila (Loan 2258-BHU); ADB. 2011. Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Bhutan for Urban Infrastructure Development Project. Manila (Loan 2258-BHU); ADB. 2011. Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Bhutan for Urban Infrastructure Development Project. Manila (Loan 2258-BHU); ADB. 2011. Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Bhutan for Urban Infrastructure Project. Manila (Loan 2816-BHU).

⁴ Third-level administrative division administered either by elected members and a mayor (class A) or by the *dzongkhag* (district) administration (class B).

⁵ Country Economic Indicators (accessible from the list of linked documents in Appendix 2).

⁶ Development Coordination (accessible from the list of linked documents in Appendix 2).

⁷ Ministry of Works and Human Settlement (MOWHS). 2016. *Formulation of National Human Settlement Strategy Analysis Report*. Thimphu (22 February 2016, CRISIL).

⁸ Government of Bhutan, MOWHS. 2008. *Thimphu City Development Strategy*. Thimphu.

⁹ Government of Bhutan. 2003. *Thimphu Structure Plan: 2002–2027*. Thimphu.

exchange for basic urban infrastructure, including internal access roads, drainage, water supply and sewerage infrastructure, and street lighting. Detailed local area plans (LAPs) were prepared for 10 areas of Thimphu—five in the north and five in the south. These areas were successfully developed with the support of ADB and the World Bank.¹⁰

5. In December 2006, ADB approved the provision of \$24.6 million in funding for the Urban Infrastructure Development Project¹¹ to improve access roads, drainage, water supply, and sanitation in four LAP areas (Babesa, Changbandu, Lungtenpu, and Simtokha) near the existing Tashi Chhodzong–Babesa Expressway in South Thimphu. ¹² This stimulated the city's systematic expansion, especially housing and commercial development. To date, 532 structures housing an estimated 19,000 persons (approximately 16% of Thimphu's population) have been developed in these four areas, significantly increasing the amount of available housing in the city. A significant number of businesses are also now operating in these four LAP areas.

6. The total number of vehicles in the country has increased rapidly, yielding an average annual growth rate of 11% from 1997 to 2012. Most of this growth occurred in Thimphu where, after slowing briefly during 2012–2014,¹³ the growth rate increased by 5.2% from 2015 to 2016,¹⁴ This is putting significant stress on Thimphu's road infrastructure. The LAP was a rare successful example of a land-pooling scheme in the developing world; however, this planned urbanization caused an unprecedented construction boom that has severely damaged the road infrastructure in several parts of the city, particularly the LAP areas in the south. Thimphu's roads were designed for normal traffic conditions, and the influx of heavy construction vehicles on residential and commercial streets has caused damage that cannot be repaired or restored by routine maintenance. At the same time, a rapid increase in vehicular traffic is creating congestion, which is further aggravated by deteriorating road conditions.

7. Several sections of the city's roads are riddled with potholes and suffer from waterlogging due to poor drainage. The government has identified road repairs and improvements in Thimphu as its top priority, with road safety and traffic management as its key concerns. Addressing these issues will be crucial to maintain the significant benefits of the LAP's successful implementation and enable this strategy to be widely and continuously replicated in the future. Thus, the government has requested ADB support to prepare a project to address these key issues urgently. The project will ensure sustainable urban development in Thimphu based on the Thimphu Structure Plan and the LAPs.

8. The project is consistent with the government's plans and strategies, and with the inclusive social development objective of ADB's country partnership strategy for Bhutan, which

¹⁰ Sector Assessment (Summary): Transport (Urban Roads and Traffic Management) (accessible from the list of linked documents in Appendix 2).

¹¹ ADB. 2006. Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Kingdom of Bhutan for Urban Infrastructure Development Project. Manila (Loan 2258-BHU).

¹² The project constructed (i) 33.7 km of secondary and tertiary access roads with associated drainage to connect the four local areas integrally to the expressway and major arterial roads; (ii) a 31.6 km network of water distribution pipes; (iii) a 28.5 km sewerage network, including 819 manhole chambers, 1,411 water and sewer inspection chambers, and associated structures; and (iv) 25.7 km of ducting for power and telecommunication networks, with 265 access shafts for cables and associated structures.

¹³ To curb the rapid increase in the number of vehicles, the government raised the vehicle tax rate in 2011 and temporarily prohibited all vehicle importation from May 2012; this was lifted in July 2014 when the vehicle tax rate was raised further.

¹⁴ Source: Ministry of Information and Communication. The number of vehicles in Thimphu increased by 6.6% from April 2014 to April 2015, and by 5.2% from April 2015 to April 2016.

aims to improve urban infrastructure and services, upgrade city planning, and strengthen the planning and management functions of municipalities.¹⁵ It is also consistent with ADB's Midterm Review of Strategy 2020 as it contributes to the envisaged outcomes of environmentally sustainable development and the development of urban infrastructure, two of ADB's five core areas of specialization.¹⁶ Lessons learned from past and ongoing urban projects and the country assistance program evaluation have been incorporated into the project design. These include (i) remaining involved in the sector to build the capacity of municipalities, (ii) meeting the municipal service requirements of rapidly growing urban populations, and (iii) strengthening municipalities' technical capacity to manage O&M.

B. Impact and Outcome

9. The impact will be improved mobility of residents in Thimphu Thromde, aligned with the Thimphu Structure Plan. The outcome will be safety and efficiency of the road network in Thimphu Thromde improved.

C. Outputs

10. The project's outputs will include (i) the repair, resurfacing, and improvement of roads in Thimphu Thromde, with existing drains and footpaths repaired, new drains constructed, new footpaths constructed along the designated roads, and existing parking spaces improved; and (ii) municipality's capacity for asset management and O&M strengthened. The output details are in Appendix 1: Design and Monitoring Framework.

- (i) Output 1: Repair, resurfacing, and improvement of roads in Thimphu Thromde completed. The project will improve 32.99 kilometers (km) of urban roads, involving the construction of 9.15 km of drainage and 4.83 km of footpaths, by 2018. The project will also widen 3.54 km of urban roads and improve 4,239 square meters of parking space. The road improvements will cover the southern and northern LAPs, and city center of Thimphu.
- (ii) Output 2: Municipality's capacity for asset management and O&M strengthened. The project will support capacity building to award contracts effectively and meet contract completion targets on time. The project will also train 10–15 key staff (at least 30% women) in project planning, design, construction, asset management, O&M, road safety, and traffic management.

D. Investment and Financing Plans

11. The project is estimated to cost \$5.11 million (Table 1).

¹⁵ ADB. 2014. Country Partnership Strategy: Bhutan, 2014–2018. Manila.

¹⁶ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific.* Manila.

Table 1: Project Investment Plan

(\$ million)

Item			Amount ^a
Α.	Base	e Cost [⊳]	
	1.	Repair, resurfacing, and improvement of roads	4.65
	2.	Capacity building for asset management and operation and maintenance	0.09
		Subtotal (A)	4.74
В.	Con	tingencies°	0.37
		Total (A+B)	5.11

Includes \$0.85 million in taxes and duties to be financed from government resources by cash contribution.

b In mid-2016 prices.

С Physical contingencies are computed at 5.5% for base costs, and price contingencies are computed at 1.4%-1.5% for foreign exchange costs and 4.0%-5.5% for local currency costs. This includes a provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

Source: Asian Development Bank estimates.

The government has requested a grant¹⁷ not exceeding \$4.26 million from ADB's 12. Special Funds resources to help finance the project, primarily works and consulting services. The government's financing will cover taxes and duties in the form of a cash contribution.

13. The financing plan is in Table 2.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (grant)	4.26	83.3
Government	0.85	16.7
Total	5.11	100.0

Source: Asian Development Bank estimates.

Ε. Implementation Arrangements

14. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).¹⁸ The proposed executing agency (Ministry of Works and Human Settlement [MOWHS]) and implementing agency (Thimphu Thromde) both have sound records of administering ADB-financed and other externally financed projects in Bhutan's urban sector.¹⁹

Aspects	Arrangements
Implementation period	October 2016–December 2019
Estimated completion date	31 December 2019 (grant closing date: 30 June 2020)
Management	

Table 3: Implementation Arrangements

¹⁷ A country's eligibility for Asian Development Fund grants under the revised grant framework is determined by its risk of debt distress. The latest debt sustainability analysis determined that Bhutan had a moderate risk of debt distress and was, therefore, eligible to receive 50% of its Asian Development Fund allocation as grants. ¹⁸ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

¹⁹ Refer to footnote 3 for previous ADB-financed urban projects. The latest ADB urban project in Bhutan for which a project completion report is available was rated successful overall. ADB. 2006. Completion Report: Urban Infrastructure Improvement Project in Bhutan. Manila (Loan 1625-BHU). The MOWHS was the executing agency for this project.

Aspects	Arrangements			
(i) Oversight body	Project steering committee			
	Secretary, MOWHS (chair); representatives from the Department			
	of Public Accounts, Ministry of Finance; DES, MOWHS; the			
	Department of Roads, MOWHS; the Gross National Happiness			
	Commission; the National Environment Commission; the			
		Division, MOWHS; the T	Thimphu Thromde;	
	and mayor, Thimphu			
(ii) Executing agency		nagement unit establish	ied in the DES)	
(iii) Key implementing agency	Thimphu Thromde			
(iv) Implementation unit		oject implementation ur		
		ead of the Road and Bri		
Dragurament		pproximately six staff w		
Procurement	International competitive bidding	1 contract	\$3.04 million	
	National competitive	1 contract	\$0.78 million	
	bidding	rcontract	φ0.70 ΠΠΠΟΠ	
Consulting services (staff training	Individual	2 person-months	\$0.01 million	
and study tours)	consultant selection	(national)	\$001111111111111	
······································		(
	Additional resource			
	person(s) (national			
	and international) in			
	accordance with			
	ADB's Project			
	Administration			
	Instructions ^a			
Advance contracting	Works	The state of the second the		
Disbursement		vill be disbursed in acco		
		landbook (2015, as am		
	time) and detailed arrangements agreed upon between the			
ADD Asian Development Deals DEC	Government of Bhutan and ADB.			

ADB = Asian Development Bank, DES = Department of Engineering Services, MOWHS = Ministry of Works and Human Settlement.

^a ADB. 2013. Specific Requirements for Recruiting Consultants by ADB. *Project Administration Instructions* 2.04 (paras. 75–77). Manila.

Sources: ADB; the Government of Bhutan.

15. The project will be implemented through two civil works packages, one procured through international competitive bidding and the other through national competitive bidding. The first package will have four lots to be procured in parallel for advance contracting,²⁰ and the second package will be bid out promptly afterwards. Contract awards are expected around the time of grant effectiveness. To ensure the sustainability of the facilities to be repaired and improved, contracts with extended defects liability periods and performance-based remuneration will be adopted, while in-house staff capacity will be strengthened through relevant training. The implementation unit will coordinate with various departments of Thimphu Thromde and relevant public utilities to minimize the re-digging of roads for various underground utilities.

²⁰ The four lots in the first package correspond to the geographic locations of civil works within the city. Bidders will be allowed to bid for one, two, three, or all four lots. Any bidder who wishes to bid for more than one lot is required to declare his or her (conditionally discounted) prices for each and every possible combination of lot awards. This process is expected to attract larger contractors to bid for multiple lots.

III. DUE DILIGENCE

A. Technical

16. The project management and implementation units have sufficient experience with, and established procedures for, road repair, resurfacing, and improvement of civil works. The engineering designs and specifications for road repairs, footpaths, and drainage infrastructure have been carefully reviewed to ensure their cost effectiveness, technical soundness, appropriateness for the local climate and topography, and road safety. Improved road infrastructure asset management and the stricter regulation of heavy construction vehicles will also be pursued under the project.

B. Economic and Financial

17. The project's economic and financial viability and sustainability have been assessed in accordance with the relevant ADB guidelines, including ADB's Guidelines for the Economic Analysis of Projects and Key Areas of Economic Analysis of Investment Projects.²¹ By repairing and resurfacing relevant road sections, the project will reduce road users' travel time and vehicle operating costs. The project's economic internal rate of return is estimated at 19.2%. A sensitivity analysis showed that the project would remain economically viable in the event of a 10% increase in costs, 10% reduction in benefits, or a 50% decrease in fuel costs. In the unlikely event of a simultaneous 10% cost increase and 10% benefit reduction, the economic internal rate of return would be 16%, which still exceeds the 12% benchmark.²²

The financial sustainability of recurrent O&M costs was assessed for the project as a 18. whole. After project completion, annual recurrent O&M costs for the improved roads are estimated to account for 1.5% of Thimphu Thromde's current annual expenditure (Nu138.3 million in FY2015). In light of the actual budget and the government's commitment to provide adequate funds for road maintenance under the Eleventh Five Year Plan, it is reasonable to expect that funds will be available to meet the O&M costs.²³ Thimphu Thromde's budget increased significantly from Nu88.1 million in FY2012 to Nu138.3 million in FY2015, and the financial analysis indicated that Thimphu Thromde will have net surpluses throughout the analysis period after project completion. This will enable it to allocate adequate resources for the regular O&M of the assets repaired and created with the project's support. Historically, the government has consistently provided Thimphu Thromde with yearly budget support and, as the government has prioritized this project, it is expected to continue to do so. The government has committed to provide adequate road maintenance funds under the plan. Contracts with extended defects liability periods and performance-based remuneration will also be adopted to ensure the sustainability of the repaired and improved facilities (para. 15). The proposed road improvements are expected to decrease the road maintenance budget substantially as a proportion of Thimphu Thromde's overall expenditure. Due to these factors, the repaired and improved facilities will likely be sustainable.

²¹ ADB. 1997. *Guidelines for the Economic Analysis of Projects.* Manila; ADB. 2013. *Key Areas of Economic Analysis of Investment Projects.* Manila.

²² Economic Analysis and Financial Analysis (accessible from the list of linked documents in Appendix 2).

²³ Government of Bhutan. 2013. *Eleventh Five Year Economic Plan, 2013–2018.* Thimphu.

C. Governance

The capacity of the MOWHS, Thimphu Thromde, and the Ministry of Finance's 19. Department of Public Accounts²⁴ for project implementation, financial management, procurement, anticorruption policy, and legal and other institutional issues has been assessed. This assessment indicated that these entities have the necessary capacity to implement the project in keeping with ADB guidelines. The overall financial management risk is moderate. An assessment of Thimphu Thromde's financial projections indicates that the municipality would be able to allocate adequate resources for the O&M of the improved infrastructure.

20. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government. The specific policy requirements and supplementary measures are described in the PAM (footnote 18).

D. **Poverty and Social**

The project's poverty reduction, social effects, and gender impacts have been assessed, 21. and relevant documents, including the summary poverty reduction and social strategy, prepared through consultations with local residents and other concerned parties. The project is categorized as having some gender elements and the project design incorporates genderresponsive features.25

Ε. Safeguards

22. The project's social and environmental impacts have been assessed, and documents outlining necessary mitigation measures, including environmental management plans, have been prepared in accordance with ADB's Safeguard Policy Statement (2009). The project is categorized as B for environment, C for involuntary resettlement, and C for indigenous peoples.²⁶ The works under the project are restricted to the urban area of Thimphu and fall within existing right-of-ways. It is therefore not expected to require involuntary resettlement or impact indigenous people.

The project has been classified as medium-high risk based on ADB's climate risk 23. checklist and preliminary screening.²⁷ The project design incorporates such measures as (i) the construction of roadside drainage channels in areas prone to flooding and waterlogging, and (ii) the use of enhanced road specifications to deal with the increased risk of flooding. In light of this particular risk profile, a further climate risk and vulnerability assessment is underway to help assess the project's particular vulnerabilities to climate change impacts and propose feasible and appropriate risk-mitigating measures to be incorporated in the detailed engineering design. These measures will help ensure the road infrastructure's climate resilience and robust operation during extreme weather events induced by climate change. Further details on the

²⁴ This department is responsible for the overall reconciliation of the project account statements and fund flow arrangements. ²⁵ Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

²⁶ Initial Environmental Examination, and Land Acquisition and Resettlement Due Diligence Report (accessible from the list of linked documents in Appendix 2).²⁷ The following key risks have been identified: (i) the flooding risk could increase; (ii) increased precipitation at higher

latitudes could increase the risk of snow loading; and (iii) increased precipitation may increase erosion, landslides, and the siltation of water courses, lakes, and reservoirs. However, climate model projections do not agree that seasonal precipitation will increase in the project location, indicating a relatively high degree of uncertainty.

project's climate change management response are in the project climate risk assessment and management report.²⁸

F. Risks and Mitigating Measures

24. The project is categorized as low risk. Project procurement is classified as category B with moderate procurement risk, and the integrated benefits and impacts are expected to outweigh the costs. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.²⁹

Risks	Mitigating Measures
Inadequate public financial	A financial management assessment for the DES of the Ministry of
management system	Works and Human Settlement, Thimphu Thromde, and the DPA of
	the Ministry of Finance was conducted in accordance with ADB's
	Guidelines for the Financial Management and Analysis of
	Projects. ^a The assessment concludes that the financial
	management systems of the DES, Thimphu Thromde, and the
	DPA are satisfactory and that the overall risk is medium. The DES and Thimphu Thromde are guided by the Government of Bhutan's
	Financial Rules and Regulations 2001, which are robust as
	measured against international practices and standards.
Inadequate staff capacities for	The capacity of key staff will be built through training in project
road asset management	planning, design, construction, asset management, O&M, road
	safety, and traffic management.
Project implementation delays	Although the Urban Infrastructure Project ^b is experiencing delays
	in procuring the wastewater treatment plant component, project
	implementation delays are not expected primarily because the
	works involved are largely routine and detailed designs,
	specifications, and drawings have already been prepared. At least
	50% of the works are expected to be bid out before the ADB Board
	of Directors considers the project. Mobilization delays will also be
	minor, as the works are within the capacity of local contractors (larger contractors are also welcome to bid).
Inappropriate technology for	Based on past experience, pavement thickness and type have
road repair	been selected to meet the changing traffic volume and location-
loud lopul	specific waterlogging problems.
Inappropriate timing of	The implementation will be timed for the dry season to prevent the
implementation	monsoon period from affecting bituminous works.
Uncertain financial sustainability ^c	The works contracts will include an extended 3-year defects
-	liability period, and the grant agreement will include a covenant
	requiring the government to ensure that Thimphu Thromde
	allocates adequate resources for road infrastructure O&M.

Table 4: Summary of Risks and Mitigating Measures

ADB = Asian Development Bank, DES = Department of Engineering Services, DPA = Department of Public Accounts, O&M = operation and maintenance.

^a ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

^b ADB. 2011. Report and Recommendation of the President to the Board of Directors: Proposed Grant to the Kingdom of Bhutan for the Urban Infrastructure Project. Manila (Loan 2816-BHU).

^c ADB. 2014. Country Partnership Strategy: Bhutan, 2014–2018. Manila. This source highlights the perennial risk of under-investment in maintenance in the transport sector. Source: ADB.

²⁸ Project Climate Risk Assessment and Management Report (accessible from the list of linked documents in Appendix 2).

²⁹ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

IV. ASSURANCES

25. The government and Thimphu Thromde have assured ADB that project implementation shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and grant documents.

26. The government and Thimphu Thromde have agreed with ADB on certain covenants for the project, which are set forth in the grant and project agreements.

V. RECOMMENDATION

27. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the grant not exceeding \$4,260,000 to the Kingdom of Bhutan from ADB's Special Funds resources for the Thimphu Road Improvement Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant and project agreements presented to the Board.

Takehiko Nakao President

7 September 2016

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned With							
Mobility of residents in	Mobility of residents in Thimphu Thromde (municipality) improved (Thimphu Structure Plan: 2002–2027) ^a						
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks				
Outcome Safety and efficiency of the road network in Thimphu Thromde improved	By 2020, a. Of the total length of urban roads in Thimphu Thromde (243.00 km), the length of unsafe segments decreased by 36.53 km	 a. Annual government statistics, including data from the Living Standards Measurement Survey and Millennium Development Goals and Sustainable Development Goals statistics b. Annual municipality urban services statistics c. Baseline and post-project data, including service delivery and quality d. Annual periodic socioeconomic and perception survey 	Public financial management system is inadequate. Thimphu Thromde does not allocate adequate resources for the O&M of the road infrastructure for the full economic life.				
Outputs 1. Repair, resurfacing, and improvement of roads in Thimphu Thromde completed	By 2019, 1a. 32.99 km of urban roads improved, with 9.15 km of drainage (2016 baseline: 35 km) and 4.83 km of footpaths (2016 baseline: not available) constructed by 2018 1b. 4,239 square meters of parking space improved by 2017 (2016 baseline: not applicable) 1c. 3.54 km of urban roads widened (2016 baseline: not applicable)	1a1c. Annual municipal reports	Coordination among relevant ministries and project executing agencies is inadequate.				
2. Municipality's capacity for asset management and O&M strengthened	By 2019, 2a. 10–15 staff (at least 30% women) trained in project planning, design, construction, asset management, O&M, road safety, and traffic	2a. Quarterly Department of Engineering Services monitoring and progress reports					

	vith Targets and Baselines	Reporting Mechanisms	Risks		
	management				
 Key Activities with Milestones 1. Repair, resurfacing, and improvement of roads in Thimphu Thromde completed 1.1 Improve urban road infrastructure package 1 bid out (Q3 2016). 1.2 Improve urban road infrastructure package 2 bid out (Q4 2016). 2. Municipality's capacity for asset management and O&M strengthened 2.1 Train staff and build capacity in project planning, design, construction, asset management, O&M, road safety, and traffic management (2017–2018). 					
Inputs Asian Development Bank: \$4.26 million Asian Development Fund grant Assumptions for Partner Financing Not applicable.					

^a Government of Bhutan. 2003. *Thimphu Structure Plan: 2002–2027*. Thimphu. Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

http://www.adb.org/Documents/RRPs/?id=44240-014-3

- 1. Grant Agreement
- 2. Project Agreement
- 3. Sector Assessment (Summary): Transport (Urban Roads and Traffic Management)
- 4. Project Administration Manual
- 5. Contribution to the ADB Results Framework
- 6. Development Coordination
- 7. Financial Analysis
- 8. Economic Analysis
- 9. Country Economic Indicators
- 10. Summary Poverty Reduction and Social Strategy
- 11. Initial Environmental Examination
- 12. Risk Assessment and Risk Management Plan

Supplementary Documents

- 13. Project Climate Risk Assessment and Management Report
- 14. Financial Management Assessment
- 15. Land Acquisition and Resettlement Due Diligence Report